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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/557,804	04/25/2000	Roger Bruce Harding	01313/100F022-US1	8941
7278 7590 06/24/2008 DARBY & DARBY P.C. P.O. BOX 770 Church Street Station New York, NY 10008-0770			EXAMINER WHITE, EVERETT NMN	
			ART UNIT 1623	PAPER NUMBER
			MAIL DATE 06/24/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

09/557,804

Applicant(s)

HARDING ET AL.

Examiner

EVERETT WHITE

Art Unit

1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 1/17/2008 (IDS) and 2/27/2008(BPAI Dec.).
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-63 is/are pending in the application.
- 4a) Of the above claim(s) 1-38 and 40-59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 39 and 60-63 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/17/2008.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

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### DETAILED ACTION

1. In view of the decision of the Board of Patent Appeals and Interferences mailed February 27, 2008 that reverses the rejection on appeal, the rejection is withdrawn and therefore moot.

In view of new prior art, i.e., "US Patent No. 6,057,438 to Hyatt et al", presented by Applicants on January 17, 2008, which indicates nonpatentability of the appealed claims, PROSECUTION IS HEREBY REOPENED under 37 CFR 1.198 for the purpose of entering the new rejection. See MPEP § 1002.02(c) and MPEP § 1214.07 and 1214.04. A new ground of rejection(s) set forth below.

Currently, Claims 1-63 are pending in this application. The instant Office action is directed to Claims 39 and 60-63.

It must be noted that Applicant's election with traverse of the invention of Group II, Claims 39-46, was submitted June 4, 2002.

As indicated in the prior Office Action of April 4, 2003, Claims 1-38 and 40-59 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Claims 39 and 60-63 are examined on the merits herein.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 39 and 60-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mansikkamaki et al (EP 0879827, already of record) in view of Hyatt et al (US Patent No. 6,057,438, newly cited).

Applicants claim a carboxymethyl cellulose ether prepared by a method comprising the steps of: (a) obtaining mercerized and recovered cellulose pulp; and (b) converting the mercerized and recovered cellulose pulp into carboxymethyl cellulose, wherein the mercerized cellulose pulp in step (a) was mercerized with a cellulose II mercerizing agent, and the mercerized and recovered cellulose pulp has a TAPPI 230 om-89 viscosity greater than 12 cP, when the cellulose pulp is southern softwood kraft. Additional independent claims drawn to the carboxymethyl cellulose ether product with additional process steps are set forth. Additional limitations in the dependent claims include the cellulose pulp being a sulfite cellulose pulp and further process steps for preparing the carboxymethyl cellulose ether.

The Mansikkamaki et al patent discloses carboxymethyl cellulose that may be derived from sulphite softwood pulp (see page 2, line 14), which embraces the softwood kraft cellulose pulp used in the preparation of instant Claims 39 and 60-63. Mansikkamaki et al also shows that mercerization of cellulose pulp during preparation of carboxymethyl cellulose is known in the art (see page 2, lines 18-21). The Mansikkamaki et al patent sets forth, in Table 2 on page 3 of the document, viscosity values for the carboxymethyl cellulose thereof that are greater than 12 cP, which embraces the viscosity values disclosed in the instant claims.

The carboxymethyl cellulose ether of the instant claims differs from the carboxymethyl cellulose of the Mansikkamaki et al patent by setting forth the instant claims in product-by-process forms. More specifically, the Mansikkamaki et al patent does not expressly disclose the method for making carboxymethyl cellulose as instantly claimed.

The Hyatt et al patent discloses the method recited in the instant claims for making similar cellulose ethers. The Hyatt et al patent shows that the process limitation recited in the instantly claimed carboxymethyl cellulose ether is known in the art. Specifically, the Hyatt et al patent provides a process for producing dissolving-grade pulp from wood pulps in a co-production process with xylan by steps comprising: (1) intimately contacting with agitation a paper-grade, hardwood, kraft or soda pulp with aqueous sodium hydroxide solution at a temperature of about 50 to 100° C; (2) subjecting the slurry resulting from step (1) to liquid/solid separation and removing sodium hydroxide from the solid material separated; (3) intimately contacting the solid material obtained from step 2 with an aqueous solution of a xylanase enzyme; (4) subjecting the slurry resulting from step (3) to liquid/solid separation; (5) intimately contacting with agitation the solid material obtained from step (4) with aqueous sodium hydroxide solution at a temperature of about 50 to 100° C; and (6) subjecting the slurry resulting from step (5) to liquid/solid separation and removing sodium hydroxide from the solid material separated to obtain dissolving-grade pulp (see column 5, lines 26-51). Hyatt et al discloses that the dissolving-grade pulp produced may be used in the manufacture of cellulose ethers as instantly claimed (see column 5, lines 28-30 of the Hyatt et al patent). Contact of the pulp with aqueous sodium hydroxide solution as described in the Hyatt et al patent embraces the mercerized steps of the instant claims. The kraft pulp disclosed in the process of the Hyatt et al patent embraces the southern softwood kraft recited in the instant claims.

One of ordinary skill in this art would be motivated to combine the teaching of the Mansikkamaki et al patent with the teaching of the Hyatt et al patent since both documents disclose preparation of cellulose ethers from sulfite softwood pulp.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the carboxymethyl cellulose ether of the Mansikkamaki et al patent with a carboxymethyl cellulose ether prepared using multiple mercerization steps in view of the recognition in the art, as evidenced by Hyatt et al patent, that paper-grade pulp can be effectively upgraded to dissolving-grade pulp using a multiple mercerization procedure, wherein the dissolving-grade pulp can be used to prepare cellulose ethers.

#### ***Summary***

4. Claims 39 and 60-63 are rejected; Claims 1-38 and 40-59 are withdrawn from further consideration.

#### ***Examiner's Telephone Number, Fax Number, and Other Information***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Everett White whose telephone number is 571-272-0660. The examiner can normally be reached on 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shaojia A. Jiang can be reached on 571-272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Everett White  
Art Unit 1623

  
Remy Yucel  
Director TC 1600